

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) ~~Process A~~ process for printing successive sheets of documents, such as securities, banknotes, checks, ID and passports, the process comprising the steps of:

~~in which said sheets are transported~~ transporting the successive sheets by a chain gripper system comprising including successive grippers attached to two parallel chains, [[and]]

providing a printing unit including a printing cylinder with at least one cylinder pit, wherein the successive sheets are printed in said printing unit while being held by the chain gripper system, and

wherein the chain gripper system has a chain speed V_c , the printing cylinder has a printing cylinder speed V_{pc} ,

wherein both speeds are synchronized such that a gripper enters said printing cylinder pit at the trailing edge of said cylinder,

wherein said speeds are then relatively modified such that said gripper arrives at a leading end of said cylinder when ~~said screen cylinder~~ ink starts to be deposited ~~deposit~~ ink on the sheet being printed.

2. (currently amended) A process as claimed in claim 1, wherein the printing unit comprises a printing cylinder and a [[silk-]] screen cylinder, ~~said printing cylinder comprising at least a cylinder pit for receiving a gripper of said chain gripper system.~~

3.(original) A process as claimed in claim 2, wherein said relative modification of speed comprises an increase of the printing cylinder speed V_{pc} .

4. (currently amended) A process as claimed in ~~one of claims 1 to 3~~ claim 2, wherein the speed of the printing cylinder and of the inking screen cylinder is slightly higher than the chain speed V_c during the printing operation.

5. (currently amended) A process as claimed in ~~one of claims 2 to 4~~ claim 2, wherein the inking screen cylinder is shifted away from the printing cylinder to allow the cylinder pit to receive the gripper and the inking screen cylinder is shifted towards the printing cylinder to allow the printing operation.

6. (currently amended) A process as claimed in ~~one of claims 1 to 5~~ claim 1, wherein during the printing operation, the sheet is maintained against the printing cylinder by vacuum.

7. (currently amended) A printing machine for planar objects [(1)] such as sheets, securities, banknotes, checks, ID and passports and other similar documents, for carrying out the process of ~~one of claims 1 to 6~~ claim 1,

comprising at least a printing cylinder [(4)], an inking a screen cylinder [(5)] and a chain gripper transporting system ~~(2,3,14,15,16)~~ with grippers [(17)],

wherein the printing cylinder [(4)] comprises at least one transversal pit [(7)] for receiving said chain gripper system [(3)] such that the inking screen cylinder [(5)] inks the planar object [(1)] while said object [(1)] is held by said chain gripper system [(3)],

wherein said printing cylinder [(4)] is driven by an independent motor [(6)]

said printing machine further comprises regulating means acting on said independent motor in order ~~to be able~~ to vary the relative speed of the cylinder [(4)] and of the chain gripper transporting system ~~(2,3,14,15,16)~~.

8. (currently amended) A machine according to claim 7, wherein said inking screen cylinder [(5)] is shiftable towards and away from the printing cylinder [(4)] by shifting means to allow the chain gripper system [(3)] to enter in said pit [(7)] before printing.

9. (currently amended) A machine according to ~~one of claims 7 or 8~~ claim 7, further comprising an aspiration system ~~(10,18)~~ for applying vacuum to the printing cylinder [(4)].

10. (currently amended) A machine according to ~~one of claims 7 to 9~~ claim 7, further comprising at least one drying unit.

11. (new) A machine according to claim 8, further comprising an aspiration system for applying vacuum to the printing cylinder.

12. (new) A machine according to claim 9, further comprising at least one drying unit.
13. (new) A process as claimed in claim 4, wherein the screen cylinder is shifted away from the printing cylinder to allow the cylinder pit to receive the gripper and the screen cylinder is shifted towards the printing cylinder to allow the printing operation.
14. (new) A process as claimed in claim 13, wherein during the printing operation, the sheet is maintained against the printing cylinder by vacuum.